DOCUMENT RESUME

ED 268 499 CS 008 393

AUTHOR Meckler, Terry Anne; Vogler, James D.
TITLE Addressing and Measuring Reading and Language Arts in the Content Areas.
PUB DATE Apr 86
NOTE 13p.; Paper presented at the Annual Meeting of the American Educational Research Association (70th, San Francisco, CA, April 16-20, 1986).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cognitive Development; Cognitive Processes; Comprehension; *Content Area Reading; Critical Thinking; *Grade 8; Inferences; Junior High Schools; Language Arts; *Listening Comprehension; *Reading Comprehension; *Reading Research; *Social Studies

ABSTRACT

A study explored whether teaching the comprehension skills of inference, drawing conclusions, sequencing, and cause and effect would increase student achievement in reading and language while at the same time imparting social science content. Subjects, 197 eighth grade students in the experimental group and 192 eighth grade students in the control group, completed the Basic Skills Inventory (BSI) as a pretest. Teachers in the experimental classrooms were given inservice training in which they learned to infuse instruction in comprehension skills with content area instruction. Although teachers in control classrooms also received inservice training, they were allowed to select content related topics that did not address reading/language skills or instructional planning. All students again completed the BSI as a posttest at the conclusion of the project year. Analysis of the results showed that teachers who received training on teaching reading and language skills learned to prepare better instructional plans and that students in the experimental group achieved significantly higher gains than students in the control group. (DF)

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ADDRESSING AND MEASURING READING AND LANGUAGE ARTS IN THE CONTENT AREAS

Terry Anne Meckler, Ed.D.

James D. Vogler, Ed.D.

Los Angeles County Office of Education

9300 E. Imperial Hwy.

Downey, CA. 90242

(213) 922-6310

Presented at the

American Educational Research Association at

San Francisco, California

April 1986

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ADDRESSING AND MEASURING READING AND LANGUAGE ARTS IN THE CONTENT AREAS

With a renewed emphasis on student proficiencies in the basic skill areas, Social Science teachers proposed to increase student achievement at the eighth grade level in reading and language while imparting Social Science content.

By developing curriculum modules infusing the communication skills in the Social Science course of study, teachers chose appropriate strategies individualizing the learning. The modules taught the comprehension skills directly - that is: inference, drawing conclusions, sequencing and cause and effect.

Using a normed referenced pretest-posttest design, students in the experimental group demonstrated statistically significant gains when compared to the control group.

ADDRESSING AND MEASURING READING AND LANGUAGE ARTS IN THE CONTENT AREAS

Framework of the Study

In response to widespread concerns about declining student achievement, the National Academy of Education Committee on Testing and Basic Skills (1978) cited changes in school practices which contributed to the decline, along with recommendations for changes to reverse the trend. Among other suggestions, they recommended a focus on basic skills infused into broader curricular areas.

During much of the same period, Educational Testing Services (1984) reported that the largest declines in achievement were in the areas of vocabulary and reading, and were attributable to a decrease in academic emphasis.

Hunt (1983), in reporting the findings of the Task Force on Education for Economic Growth, Education Commission of the States, echoed these same concerns and called for curriculum renewal that increased the instructional time in key areas including the basic skills.

D'Amico (1984), in discussing solutions to the problem of declining achievement in the effective schools and high school reform movements, recommended that the basic skills should be taught in all subjects and courses. Levine and Eubanks (1983), and Levine, Levine, and Eubanks (1984) also stressed the importance of language development and integration of basic skills in both regular and elective courses.

Vacca (1975) defined a functional reading strategy in content areas as "...one that allows classroom teachers to integrate skills instruction with content understanding" (p. 108). He further stated, however, that little empirical evidence was available to guide the development of functional reading approaches in content areas.

The present study was conducted in order to contribute to a continuing need for such evidence as one solution to the problem of declining achievement.

Research Questions

In order to determine if, as it has been suggested above, infusing an emphasis on basic skills in subject matter courses is an effective approach to improving achievement of junior high pupils in reading and language, the following research questions were posed in the study:

1. Will providing classroom teachers in social studies education with inservice training on teaching reading and language skills within the context of the social science curriculum lead to improved instructional strategies and planning?

2. Will students of teachers receiving such inservice training demonstrate greater growth on a social science related test of reading and language skills than students of teachers not receiving such training?

Hypotheses

The above research questions gave rise to the following specific hypotheses:

1. Following the five inservice training sessions in the project, there will be a statistically significant difference between the mean Quality of Instructional Planning Scale (QIPS) scores of an experimental and a control group of junior high school social science teachers.

2. Following one semester of instruction in the project, there will be a statistically significant difference between the gain scores of an experimental and control group of pupils on the Basic Skills Inventory (BSI).

Method

Sample: Non-randomized experimental and control groups were formed utilizing social studies classes of eighth grade students in Los Angeles County. Individual schools used in the study were selected on the basis of a desire to participate and if a matched control site could be found within the geographical boundaries of the county. Schools were also matched by socioeconomic and other background factors, and California Assessment Program test scores.

After selecting eight pairs of schools matched as closely as possible, one member of each pair was assigned to the experimental or treatment condition while the remaining one became a control school. One classroom for each of the participating schools was randomly selected for inclusion in the study.

A total of sixteen (16) eighth grade classrooms participated in the study resulting in 389 matched score comparisons. Eight classrooms with a total of 197 students were assigned to the experimental group while 192 students in the remaining eight classrooms constituted the control group.

Instruments: Two instruments were employed to measure the variables in the study. First, reading and language skills in a social science related context were measured by a specially constructed form of the Basic Skills Inventory (BSI), a collection of tests spanning grades 1-12 in the areas of reading, language arts, and mathematics. The major purpose of the battery is to provide basic skills information for making pupil placement, program referral, and program evaluation decisions (Los Angeles County Office of Education, 1983).

Because all of the tests in a subject area contain items from the same Rasch calibrated item bank, scores from different levels of the inventory or from specially constructed tests made up of items selected from the bank are directly comparable on a scale ranging from 50 - 800.

The BSI item banks were developed to reflect national curricular objectives in

the areas presented, and, in every instance the items have been carefully scrutinized with respect to their content validity, freedom from bias, and statistical properties.

The form of the BSI employed in the current study consists of 50 items selected as having a subject or context related or appropriate to social studies, and measuring one of the communication skills targeted in the project curriculum. In a separate pilot study, its reliability, as indicated by the Kuder-Richardson Formula 20 coefficient was .90.

The second variable in the study, quality of instructional strategies and planning, was measured by the Quality of Instructional Planning Scale (QIPS), a locally constructed 5 point rating scale reflecting the following content and weighting: Teacher Instruction (50%); Pupil Teacher Interaction (30%); and Teacher Monitoring/Supervising (20%).

Procedure: The study was designed to incorporate a non-randomized, intact groups design with the pretest/posttest difference as the dependent variable. This practice is supported by Richards who concluded that, if taken over a long enough interval, difference scores based on non-random assignment can provide reasonably accurate measures of school impact (Richards, 1975, p. 309).

Prior to initiating the inservice training with the experimental group teachers, all pupils in both the experimental and control group classrooms were administered the Basic Skills Inventory (BSI) as a pretest. The use of the intact groups design was strengthened by the determination that the two groups did not initially differ in reading and language skills since the pretest difference was not statistically significant at the .05 level.

The inservice training provided to the eight experimental group teachers consisted of five full day sessions during the course of the year. Each of the sessions addressed the use of the following basic reading/language skills as part of the new social science curriculum: word meaning, complete sentences, paragraphs, sequence, main topic, topic sentences, drawing conclusions, cause and effect, and fact and opinion.

Through the use of lecture, demonstration, group planning, simulation, and role playing the participants were taught to infuse instruction in these skills into the following six modules of the social science curriculum: Introduction to Social Science and the Humanities, Geography, History, Political Science, Economics, and Sociology. Throughout the inservice training, the importance of instructional planning incorporating effective classroom strategies and activities were stressed. Teachers in the control classrooms received the same schedule of inservice training but were allowed to select content related topics which did not address reading/language skills or instructional planning.

Teachers in both the experimental and control classrooms were periodically requested to submit samples of classroom instructional plans for rating on the Quality of Instructional Planning Scale (QIPS).

At the conclusion of the project year, all pupils in both the experimental and control classrooms were administered the BSI as a posttest.

Results and Findings

The significance of the difference between the mean QIPS ratings for the instructional plans submitted by the experimental and control group teachers, as stated in hypothesis one, was determined by a two-tailed t-test for uncorrelated means. The difference, in favor of the experimental group teachers, was significant beyond the .01 level (Table I).

The significance of the difference between the mean gains of the experimental and control groups, as stated in hypothesis two, was also determined by applying a two-tailed t-test for uncorrelated means (Garrett, 1958) to the data obtained from the pretest and posttest administrations of the BSI. As can be seen from an examination of Table II, the difference in favor of the experimental group was significant beyond the .05 level.

Based on the above results of the statistical analysis of the data, the

following conclusions were drawn:

1. Teachers who received training on teaching reading and language skills within the context of the social science curriculum learned to prepare significantly better instructional plans than teachers who did not receive such training.

2. Eighth grade students whose teachers received inservice training on teaching reading and language skills within the context of the social studies curriculum achieved significantly greater gains in these skills than students whose teachers did not receive such training.

Thus, by infusing reading and language into the social studies curriculum, project teachers improved the skills of the students through additional instruction without sacrificing time or curriculum content.

Table 1

Mean Scores on the Quality of

Instructional Planning Scale For the Two Groups

GROUP	N	MEAN	S.D.	MEAN DIFFERENCE	t
Experimental	8	37.75	2.33		
				14.50	8.33*
Control	8	23.25	4.32		

*p < .01

TABLE II

PRETEST, POSTTEST, AND GAIN SCORE

MEANS AND STANDARD DEVIATIONS ON

THE BASIC SKILLS INVENTORY

	Pretest	Posttest	Gain	Difference	t
Experimental	32.7	36.6	3.9		
n=197	(9.07)	(7.6)			
				2.0	2.24*
Control	32.5	34.4	1.9		
n=192	(10.1)	(9.8)			

*$p < .05$

REFERENCES

D'Amico, J.D. Linking the Effective School and High School Reform Movements. Education Digest, 1984, 49, 42-45.

Educational Testing Service. Factors Associated with Test Score Decline: Preliminary Report Princeton, New Jersey, 1984.

Garrett, H.E. Statistics in Psychology and Education. New York: Longmans, Green and Company, 1958.

Hunt, J.B. Action for Excellence. Educational Leadership, September, 1983, 14-18.

Levine, D.U. and Eubanks, E.E. Instructional and Organizational Arrangements at an Unusually Effective Inner-City Elementary School in Chicago. Paper presented at the annual meeting of the American Educational Research Association, Montreal, April, 1983.

Levine, D.U., Levine, R.F., and Eubanks, E.E. Characteristics of Effective Inner-City Intermediate Schools. Phi Delta Kappan, June 1984, 707-711.

Los Angeles County Office of Education. Basic Skills Inventory (BSI): Technical Report, Downey, California, 1983.

National Academy of Education Committee on Testing and Basic Skills. Improving Educational Achievement. Report to the Assistant Secretary for Education. Washington, D.C.: U.S. Government Printing Office, 1978.

Richards, J.M. A Simulation Study of the Use of Change Measures to Compare Educational Programs. American Educational Research Journal, 1975, 12, 299-311.

Vacca, R.T. The Development of a Functional Reading Strategy: Implications for Content Area Instruction. Journal of Educational Research, 1975, 69, 108-112.

APPENDIX A

_____GRADE

_____SCHOOL

_____TEACHER

QUALITY OF INSTRUCTIONAL PLANNING SCALE (QIPS)

SCALE	not at all 0	bad 1	average 2	very good 3	outstanding 4

PART I. TEACHER INSTRUCTIONAL TIME 50% of rating

Introducing/Reviewing Concept
Modeling/Demonstrating Concept
Visual, Oral, Tactal Presentation
Relating Concept to Previous Learning

SCORE_____ X 5 = _____

- -

PART II. PUPIL/TEACHER INTERACTION TIME 30% of rating

Eliciting Examples from Students
Discussing Concepts with Students
Allowing Students to:
orally, visually or tactilely
demonstrate concept
Allowing Students to work in pairs or groups

SCORE_____ X 3 = _____

- -

PART III. TEACHER MONITORING/SUPERVISING STUDENT PERFORMANCE 20% of rating

Allowing supervised student practice of skill(s)

SCORE_____ X 2 = _____